

LISTING OF CLAIMS

1. (Previously Presented) An apparatus for extracting volatile constituents, comprising:

a sample vessel for containing a sample of a solid containing volatile constituents, a gas feeding device for filling the sample vessel with inert gas, a thermostatic chamber for containing said sample vessel and keeping said sample contained in said sample vessel at a temperature at which said sample is not thermally decomposed, a canister depressurized in advance, and a valve for selectively connecting said canister to said sample vessel contained in said thermostatic chamber and kept at said temperature, thereby depressurizing said sample vessel and collecting constituents evaporating from said sample due to the depressurization, in said canister with said inert gas.

2. (Previously Presented) The apparatus for extracting volatile constituents according to claim 1, wherein said gas feeding device is designed to replace atmospheric air in said sample vessel with said inert gas, and said canister is depressurized to about 1×10^2 Pa in advance to collect all the constituents that evaporate from the sample when said canister is selectively connected to said sample vessel.

3. (Previously Presented) A method of extracting volatile constituents, comprising the steps of filling a sample vessel containing a sample of a solid containing volatile constituents with inert gas to thereby replace atmospheric air in said sample vessel with said inert gas and keeping said sample at a temperature at which said sample is not thermally decomposed, and thereafter connecting a canister depressurized in advance to said sample vessel in which said sample is kept at the temperature at which said sample is not thermally decomposed, to thereby depressurize said sample vessel and collect constituents evaporating from said sample due to the depressurization, in said canister with said inert gas.

4. (Original) The method of extracting volatile constituents according to claim 3, wherein He or N₂ is used as said inert gas.

5. (Canceled)

6. (new) A method of extracting volatile constituents from a solid sample containing volatile constituents, comprising the steps of:

(I) providing a sample vessel the interior of which is filled with air;

(II) placing the sample in the sample vessel;

(III) filling the sample vessel with inert gas to thereby displace any air in the sample vessel producing a sample vessel containing the sample and inert gas;

(IV) providing a canister, the interior of which is at sub-atmospheric pressure;

(V) providing a fluid connection between the interior of the canister and the interior of the sample vessel;

whereby the pressure of the interior of the sample vessel is rapidly reduced; whereby the volatile constituents present in the solid are caused to leave the sample and are caused to leave the sample vessel and are caused to collect in the canister.

7. (new) The method of claim 6 wherein the method is practiced at a temperature below which the sample would be thermally decomposed and below which the volatile constituents would be thermally decomposed.

8. (new) The method of claim 6 further comprising the step of:

(VI) analyzing the constituents in the canister.

9. (new) The method of claim 6 wherein the solid sample is a sample of tobacco.

10. (new) An apparatus for extracting volatile constituents from a solid sample containing volatile constituents, said apparatus comprising:

(A) a sample vessel having an interior for holding the solid sample;

(B) means for feeding inert gas to the sample vessel in order to displace any air in the sample vessel and leave the sample vessel substantially completely full of inert gas at atmospheric pressure;

(C) means for maintaining the sample vessel and the solid sample in said the sample vessel at a temperature at which the solid sample is not thermally decomposed;

(D) a canister the interior of which is maintained at sub-atmospheric pressure;

(E) a fluid conduit connecting the interior of the sample vessel to the interior of the canister;

(F) a valve in the conduit for selectively connecting the canister to the sample vessel;

whereby closing the sample vessel when filled with inert gas followed by opening the valve causes: (1) depressurization of the sample vessel, and (2) evaporation of volatile constituents from

the solid sample containing volatile constituents, and (3) transfer of the volatile constituents from the solid sample to the canister.